

**DOCUMENT RESUME**

01164 - [A0751350] (Restricted)

[Globe Safety Product's Inquiry Regarding Firefighters Breathing Apparatus Developed for NASA by Scott Aviation Company].  
PSAD-77-68; B-175960. February 22, 1977. 2 pp.

Report to Rep. Charles W. Whalen, Jr.; by Robert P. Keller,  
Deputy Comptroller General.

Issue Area: Science and Technology (2000).  
Contact: Procurement and Systems Acquisition Div.  
Budget Function: General Science, Space, and Technology:  
Supporting Space Activities (255).  
Organization Concerned: National Aeronautics and Space  
Administration; Globe Safety Products, Inc.; Scott Aviation  
Co.  
Congressional Relevance: Rep. Charles W. Whalen, Jr.  
Authority: Space Act of 1958.

Globe Safety Products, Inc.'s concerns about a firefighters' breathing apparatus developed by Scott Aviation Company under a 1972 NASA contract were investigated. Globe claimed that NASA improperly allowed Scott to use Government tooling and design data generated under the contract to develop a commercial breathing apparatus and that NASA financed a publication which advertised the Scott apparatus. Findings/Conclusions: Scott did not use any special tool designs or tooling to fulfill its contractual responsibility for production of the NASA firefighter breathing system units. The technology transfer mandate of the Space Act of 1958 charged NASA with responsibility for the widest and most practical and appropriate dissemination of information concerning its activities. Information about the Scott system was in accordance with such legislation. Globe advised that it was not protesting NASA's award of the contract to Scott, but was requesting a ruling by the Comptroller General as to the justification of the NASA expenditure of funds to advertise Scott's firefighters' breathing apparatus. (ERS)

01164



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

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FEB 22 1977

B-175960

The Honorable Charles W. Whalen, Jr.  
House of Representatives

Dear Mr. Whalen:

Your October 20, 1976, letter asked us to review the points raised by Globe Safety Products, Inc. in its September 1, 1976, letter to the National Aeronautics and Space Administration's (NASA) Johnson Space Center. Globe sent an information copy of its letter to NASA to the General Accounting Office. Globe's letter to NASA as well as its October 6, 1976, letter to you detailed Globe's concerns regarding a firefighters breathing apparatus developed by Scott Aviation Company under a NASA contract awarded in 1972.

Globe claimed that NASA improperly allowed Scott to use Government tooling and design data generated under the NASA contract to develop its own commercial breathing apparatus. In addition, Globe alleged that NASA financed a publication which advertised the Scott apparatus.

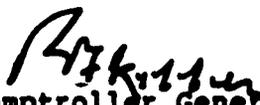
NASA investigated the points raised by Globe and reported the results of its investigation in a letter dated December 3, 1976. NASA's investigation disclosed that Scott did not use any special tool designs or tooling to fulfill its contractual responsibility for production of the NASA prototype firefighters breathing system units. NASA also stated that its technology transfer mandate from the Space Act of 1958 charged it with the responsibility to provide for the widest and most practicable and appropriate dissemination of information concerning its activities and the results thereof. According to NASA, its participation in the dissemination of the document which included information about the Scott system was in accordance with such legislation. Further details are included in the enclosed copy of NASA's letter to Globe.

In a letter to Globe dated September 20, 1976, the General Accounting Office acknowledged receipt of the information copy of Globe's letter to NASA's Johnson Space Center and inquired whether Globe's letter was a protest. Globe advised us, in a letter dated October 15, 1976, that it was not protesting NASA's award of the contract to Scott, but that it was of the opinion that Government funds were expended by NASA to advertise a product developed under NASA's contract with Scott. Globe stated that it was requesting a ruling by the Comptroller General as to the justification of the NASA expenditure of funds to advertise the firefighters breathing apparatus developed by Scott.

Since Globe's inquiry is not a protest, a formal ruling by the Comptroller General does not appear to be appropriate. In matters of this type, authority granted the Comptroller General does not specifically provide for rulings on requests from private citizens.

Our representatives were informed that this should satisfy your request for our assistance. If you have any specific questions regarding the points discussed in the NASA report, we shall be glad to follow up on them.

Sincerely yours,

  
DEPUTY Comptroller General  
of the United States

Enclosure



National Aeronautics and  
Space Administration

Washington DC  
20546

Private Use of K

DEC 3 1976

Mr. Max Isaacson  
Chairman of the Board  
Globe Safety Products, Inc.  
125 Sunrise Place  
Dayton, OH 45407

Dear Mr. Isaacson:

This is in regard to your letter to the NASA/Johnson Space Center Legal Office dated September 1, 1976, concerning the development and commercialization of a firefighters breathing system. Your letter has been referred to this office for response.

At issue are certain results of a contract which was competitively awarded to the Scott Aviation Company. As we understand your letter, you have the following concerns:

a. That the changes to the firefighters breathing system made by Scott Aviation Company following its completion of its contract with NASA/Johnson Space Center, and the tool designs and tooling utilized in the production of the commercial units, are government property and therefore subject to release to the general public.

b. Your question whether NASA has authority to expend government funds in contracting with Public Technology, Inc. to produce the booklet, "Scott Air-Pak 4.5 Firefighters Breathing System."

Pursuant to your correspondence, appropriate personnel at the NASA/Johnson Space Center reviewed and evaluated the concerns brought out in your correspondence regarding whether the Government retained any rights in the commercial units that Scott is presently producing and whether there was any special government tooling or tooling drawings available to the general public. The research and review revealed that Scott Aviation Company fully complied with its contractual obligations and developed an optimum

breathing system configuration available for competitive procurement. This optimum system is based on NASA aerospace technology and analysis and engineering judgments of requirements resulting from interaction with a User Requirements Committee consisting of fire service related people. Copies of the drawings of this optimum system were made available to the public, and were made available to Mr. Benjamin Smilg, Vice President and Chief Engineer for Globe Safety Products, Inc., at a symposium held at the NASA/Johnson Space Center on November 11, 1975. He received both a set of blue line drawings and 179 aperture cards at that time and also spent three to four hours the next day reviewing the system design with NASA engineers. Availability of the drawings was announced in the Federal Register on October 15, 1975.

After completion of its contract with NASA/Johnson Space Center, Scott Aviation Company made available to the public a firefighters breathing system of their own with certain modifications based on their manufacturing and business judgment. All modifications to the NASA prototype firefighters breathing system made by Scott Aviation Company for commercial purposes were done at Scott's discretion and expense and exclusive of any contractual requirements. NASA does not have either a contractual right or any other legal right to the drawings of Scott's commercial unit.

We have also been advised by our technical personnel that there were no special tool designs or tooling utilized by Scott pursuant to the above mentioned contract in the production of the NASA prototype. Only a limited number of prototype firefighters breathing system units were produced by Scott on the NASA contract and not as a part of a normal production process.

NASA's technology transfer mandate has come from the Space Act of 1958 that charged NASA with the responsibility to "provide for the widest and most practicable and appropriate dissemination of information concerning its activities and results thereof." This mandate has been reinforced by extensive legislative history and strong expressions of Congressional intent and instructions to aggressively move technology into the public sector. Without commercialization of aerospace technology there could be no widespread availability to the user and the technology would have no practical impact.

Because the system was developed for public sector use, it was necessary that accurate descriptive information be made available to the fire service to allow them to evaluate the new technology. The document referred to was designed to fulfill the dissemination of information purpose, and to provide a practical means to respond to the many inquiries being received. Accordingly, the document includes a description of the NASA development and test program, the overall system description, specifications of the commercially available system and the NASA prototype, as well as sample procurement specifications, based on performance requirements. The procurement specifications include a specific statement that "the specifications are written so as to allow competitive procurement of commercially available equipment if, and when other companies produce similar products."

NASA's intent that this innovative technology would be commercialized widely was described in several places in the document. The following statement appears in the introductory section: "Scott Aviation Company has introduced the first commercially available breathing apparatus primarily based on the NASA development and testing program. Other manufacturers have also expressed interest in incorporating the design innovations developed during the NASA program into their products. NASA does not endorse any commercial products." (Emphasis in italics in original.) An additional statement was included in the description of the NASA development and testing program:

"NASA has maintained extensive records of the development and field test programs for the firefighters breathing system. This information is made available to private firms who desire to use it in developing improved firefighters breathing systems. Scott Aviation has produced the first commercially available breathing apparatus as a result of the NASA development and testing program. Other manufacturers have also expressed interest in incorporating the design innovations developed during the NASA program into their products. NASA cannot endorse any commercial product based on the adaption of the outputs of their developmental programs." (Emphasis added)

NASA, Public Technology, Inc., and Scott participated in the dissemination document and included information about the Scott system and its availability to pursue commercialization pursuant to the mandate described above. The price of the system was a public design goal set by the User Requirements Committee and had to be within 10% of conventional systems.

NASA's technology transfer approach has been further reinforced by the recent commercial introduction of a breathing apparatus by Mine Safety Appliances, Inc. which incorporates the NASA type of filament-wound pressure vessel. As requested by Mine Safety Appliances, Inc., NASA assisted in their proceedings with the Department of Transportation by providing details on NASA tests and experience. The pressure vessels have also been used by the Boeing Company to pressurize 747 escape chutes and are being evaluated for SCUBA equipment by U.S. Divers Company. As a continuation of its dissemination program, NASA will publicize all these applications in an upcoming report.

I apologize for the length of this letter, but I wanted to answer your letter as fully as possible. NASA is particularly proud of the firefighters breathing apparatus because of its great potential to save lives of both firefighters and civilians. I hope that you will consider including some of the innovative features in your products.

Sincerely,

15/ Edward Z. Gray  
 Assistant Administrator for Industry  
 Affairs and Technology Utilization

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